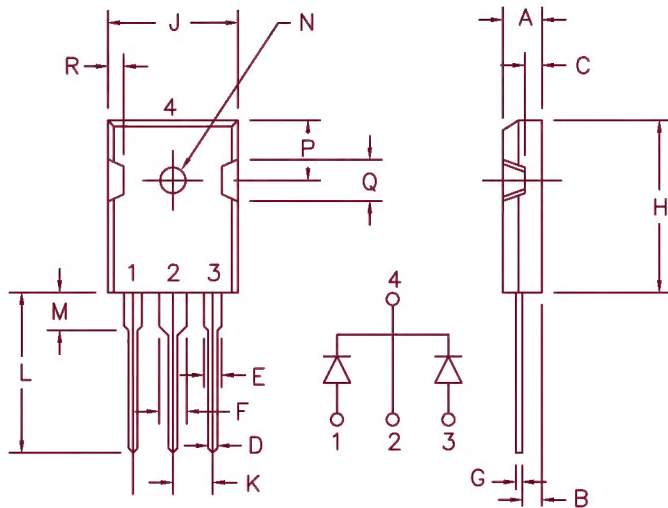


# 40 Amp Schottky Barrier Rectifier FST4035 — FST4045



Similar to TO-247AD

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	.118	.133	3.00	3.38	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.215	—	5.46	—	Typ.
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Microsemi Catalog  
Number

FST4035  
FST4040  
FST4045

Repetitive Peak  
Reverse Voltage

35V  
40V  
45V

Transient Peak  
Reverse Voltage

35V  
40V  
45V

- Schottky Barrier Rectifier
- Reverse energy tested
- Guard ring for reverse protection
- Low forward voltage
- 150°C junction temperature
- $V_{RRM}$  35 to 45 volts

## Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 40 Amps	$T_C = 104^\circ C$ , square wave, $R_{\theta JC} = 1.0^\circ C/W$
Average forward current per leg	$I_F(AV)$ 20 Amps	$T_C = 104^\circ C$ , square wave, $R_{\theta JC} = 2.0^\circ C/W$
Maximum surge current per leg	$I_{FSM}$ 400 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max. peak forward voltage per leg	$V_{FM}$ .48 Volts	$I_{FM} = 20A$ , $T_J = 150^\circ C^*$
Max. peak forward voltage per leg	$V_{FM}$ .55 Volts	$I_{FM} = 20A$ , $T_J = 25^\circ C^*$
Max. peak reverse current per leg	$I_{RM}$ 1 Amp	$V_{RRM}$ , $T_J = 150^\circ C^*$
Max. peak reverse current per leg	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ C$
Typical junction capacitance per leg	$C_J$ 1200 pF	$VR = 5.0V$ , $T_J = 25^\circ C$

\*Pulse test: Pulse width 300  $\mu$ sec. Duty Cycle 2%

## Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ C$ to $+150^\circ C$
Operating junction temp range	$T_J$	$-55^\circ C$ to $+150^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$2.0^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$1.0^\circ C/W$ Junction to case
Weight		.22 ounces (6.36 grams) typical

# FST4035 — FST4045

Figure 1  
Typical Forward Characteristics — Per Leg

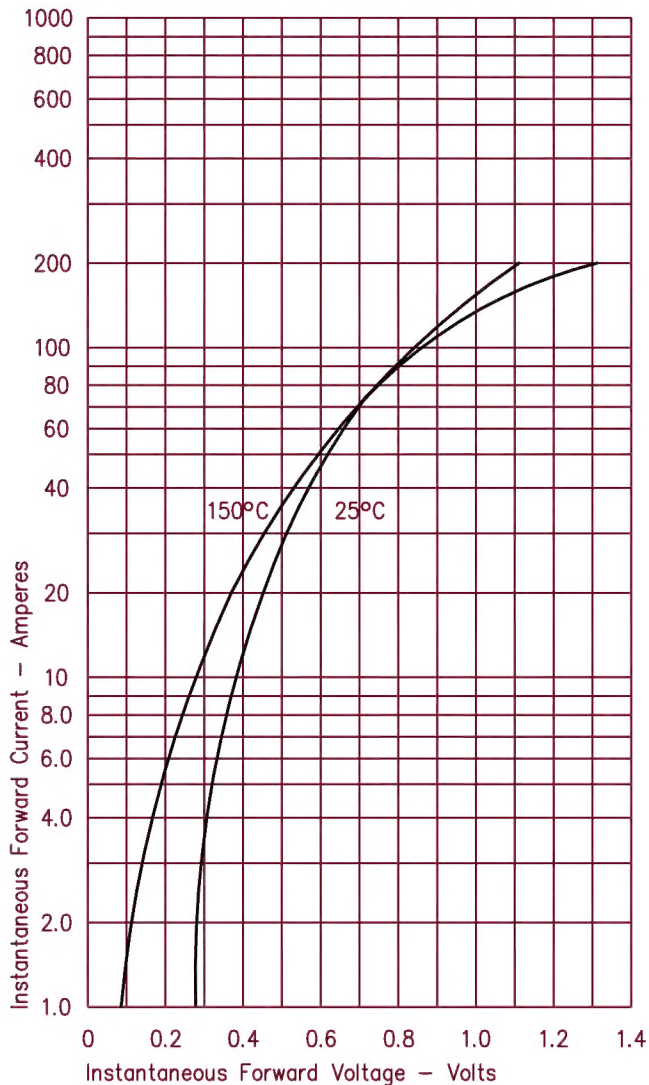


Figure 3  
Typical Junction Capacitance — Per Leg

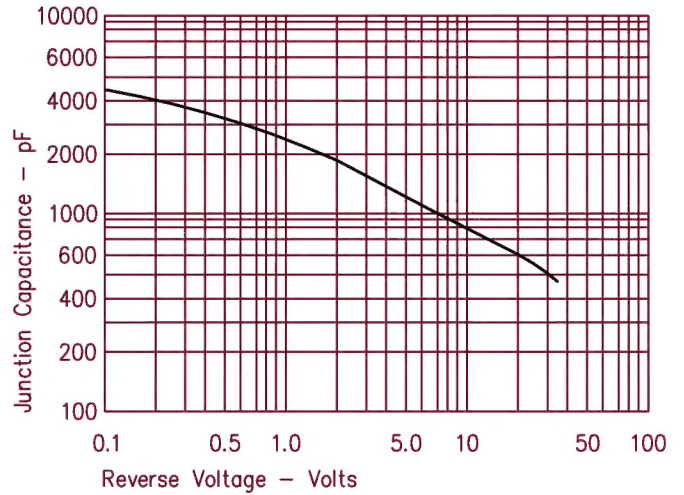


Figure 4  
Forward Current Derating — Per Leg

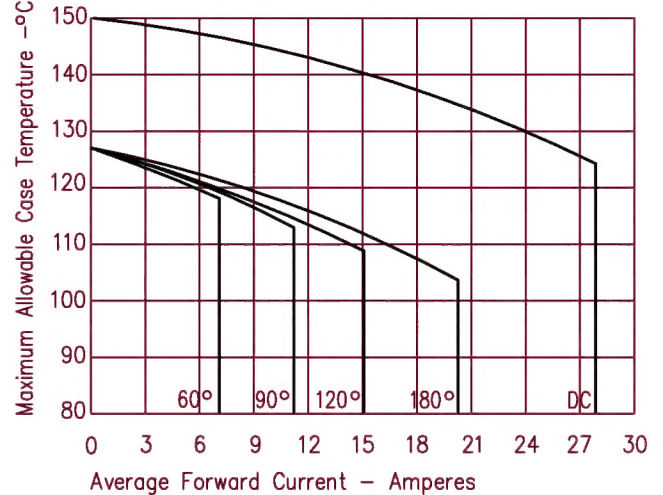


Figure 2  
Typical Reverse Characteristics — Per Leg

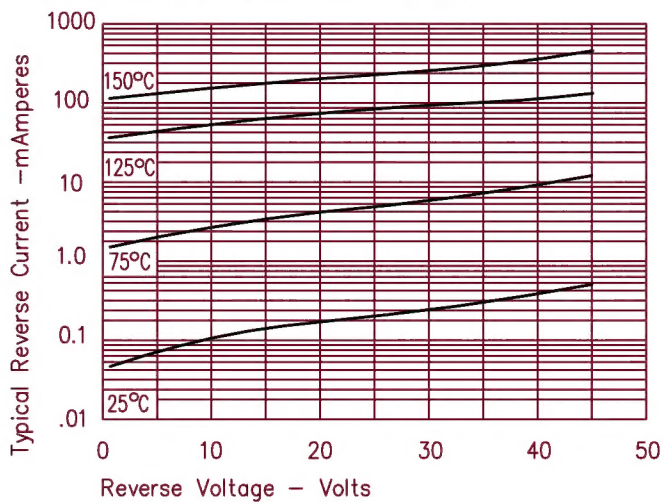


Figure 5  
Maximum Forward Power Dissipation — Per Leg

